

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Albuquerque**

Site Summary Level: **Grand Junction Office**

Project **AL031 / Long-Term Surveillance and Maintenance at Grand Junction**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0184**

General Project Information

Project Description Narratives

Purpose, Scope, and Technical Approach:

Definition of Scope: Long-Term Surveillance and Maintenance (LTSM) Program

The Grand Junction Office (GJO) is the focal point for the DOE on all LTSM Program activities for DOE sites that have been cleaned up and have no long-term mission. GJO presently has custody of 25 sites requiring long-term stewardship to meet DOE, NRC, EPA, and other environmental regulations. GJO will likely take custody of an additional 35 sites requiring similar activities by FY 2006. Required long-term activities include surveillance, environmental monitoring, maintenance, site security, annual reporting, and emergency response. An additional part of the project is the Long-Term Radon Management (LTRM) program. The scope of LTRM is to operate and oversee the Cheney Disposal Cell. It is expected that Cheney will be opened once during each year for about four weeks, at which time it will receive approximately 2,000 cubic yards of tailings and other contaminated materials. An additional week of operations at the Cell per year will be required to decontaminate equipment and secure the facility. During the open period every third year, or more as required, stockpiled material will be placed in the cell and compacted. Environmental monitoring will be performed to meet the requirements of DOE, NRC, and the State of Colorado. Placement of a final cover and subsequent closing of the cell will take place in FY 2023, unless authorization is received to continue operations. The LTRM project began in FY 1998.

The LTSM Program activities at the MMTS and Monticello Vicinity Property (MVP) Sites will include surveillance and maintenance of the repository; surveillance and maintenance of lands restored after completion of the remedial actions; surveillance and maintenance of properties where supplemental standards have been applied as required by the Supplemental Standards LTSM Program Plans; preparation of Remedial Action Reports for OUs I and III and Preliminary and Final Close Out Reports for the MMTS; operation and maintenance of the selected remedy for OU III surface and ground water remediation; ground water and surface water monitoring; decommissioning of the evaporation pond at the repository site; and payment of the State of Utah grant, as necessary, pursuant to the FFA. LTSM Program will also include performing the required CERCLA 5-year reviews.

The scope of the long-term activities associated with supplemental standards will include routine surveillance by the DOE on-site representative, specifically monitoring planned and unplanned excavations and the recording of observations. Annual inspections will audit the ongoing work on the on-site representative and inspect selected excavations and other areas of particular interest. Excavated contaminated materials will be temporarily stored until DOE can transport the materials to the Cheney Disposal Cell. Surveillance and maintenance of the repository will include inspection of the repository to evaluate re-vegetation success, erosional stability of the repository cover, and the integrity of the evaporation pond used to store leachate from the repository sumps. The sumps will be pumped out periodically into the pond for evaporation. The pond will eventually be decommissioned when the volume of water pumped can be more efficiently handled by some other method.

Technical Approach: LTSM Program

Activities include: (1) inspecting sites annually or more frequently, if required; (2) maintaining security systems and establishing liaisons with local authorities for notification of security breaches; (3) maintaining sites and restoring degraded as-built features as needed; (4) monitoring air, soil, and surface and ground water, as necessary; (5) responding to emergencies in the event of a site security breach or a natural disaster; (6) providing additional designs and performing construction, as needed, due to site failure or new regulatory requirements; (7) maintaining permanent site record files and providing reports annually within DOE and to outside agencies; and (8) responding to public requests for information. For the LTRM portion

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of the project, activities include: (1) receiving tailings and tailings-contaminated materials; (2) field testing of received materials; (3) decontaminating transportation and site equipment; (4) maintaining site engineered features; (5) providing site security; (6) performing environmental monitoring of soil, water, and air; (7) maintaining permanent site record files; (8) providing reports annually within DOE and to outside agencies and regulators; and (9) responding to public requests for information.

The technical approach for implementation of LTSM Program activities at the Monticello Sites will be established in the Monticello LTSM Program Plan. This plan will compile the LTSM Program requirements for the repository, millsite, and supplemental standards properties and wetlands surveys. The Plan will be reviewed prior to turnover of the LTSM Program activities to the LTSM Program for implementation on October 1, 2002.

Project Status in FY 2006:

This Program will continue beyond FY 2006. Surveillance and Monitoring activities at particular sites varies from 10s to as many as 1,000 years, depending on the requirements established for each site. Active remediation of at least two UMTRA Ground water sites will be transferred to the LTSM program in FY 2011, and the operation of the treatment systems will continue to FY 2020. Current projections indicate that at least 50 and possibly over 100 sites will eventually be transferred to LTSM. The LTRM portion of this project will continue beyond FY 2006. The DOE will manage and operate the Cheney Disposal Cell for approximately one month per year to dispose of mill tailings material. Decontamination of transportation equipment; surveillance, maintenance and security of the facility; and environmental monitoring will continue as part of the operations and requirements. Permanent placement of material will likely be performed every three years. At the Monticello Sites, the LTSM Program will continue to implement the Monticello LTSM Program Plan, including ground water pump and treat operations, if required, and the CERCLA 5-year reviews.

Post-2006 Project Scope:

Activities beyond FY 2006 are the same as for FY 2006, except that additional sites are expected to be added.

Project End State

Activities will continue at the assigned sites, in accordance with approved LTSM Program plans. For the LTRM portion of the project, it is anticipated that by FY 2023, all tailings and tailings contaminated materials will have been placed in the Cheney Disposal Cell and the Cell closed and licensed by the NRC. Long-term stewardship activities of the cell will continue for up to 1,000 years as part of the LTSM Program.

The Project End State for the implementation of the Monticello LTSM Program Plan is indeterminate. Long-Term Surveillance and Monitoring Program activities will continue indefinitely to ensure that 1) the on-site repository continues to meet performance standards, 2) the land use restrictions associated with supplemental standards for OU III are enforced, and 3) commitments to the City of Monticello and Utah Department of Transportation for the application of supplemental standards are met. The LTSM Program will also be required to conduct the operation and maintenance of the ground water remediation effort until cleanup goals are reached and continue the CERCLA 5-year reviews.

Cost Baseline Comments:

Escalation rate is assumed to be 2.1% per year. No contingencies have been included in the estimates. The cost baseline for Long-Term Stewardship Program is based on the FY 1999 Ten Year Plan (now Paths to Closure) budget formulation process. The estimate is based on two key assumptions: (1) the NRC will license all Title I sites by FY 1999 except the Cheney Disposal cell and (2) other sites will be transferred to GJO in a timely manner

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so that by FY 2006, over 50 sites will have been placed in GJO custody. The LTRM portion of the project cost baseline assumes that: (1) the Cheney Disposal Cell will remain open for four weeks each year until FY 2023, (2) the site will receive an average of 2000 cubic yards of material each year, and (3) emplacement and compaction of material in the Cell will occur every third year.

LTSM Program cost estimates for Monticello are based on agreements made with the regulators and stakeholders for the surveillance and monitoring of areas where supplemental standards have been applied, remediated areas, and the repository. The costs to operate the ground water treatment facility are made on the basis of actual operating costs of the facility.

Safety & Health Hazards:

The hazards from disposal facilities when placed in the custody of the Long-Term Stewardship Program are very low because the radioactive materials wastes are isolated by physical barriers. Radon gas emissions are controlled below EPA standards and water intrusions are prevented by thick layers of compacted soils.

Safety & Health Work Performance:

Work will be performed in a manner that assures a safe work environment that is free of recognized hazards and results in minimal occupational exposures.

The following is a Baseline Validation Description. The description is being added to this box instead of the below box because IDMS will not allow data to be saved in the box below and the problem has not been resolved.

Baseline Validation Description:

Annually, the DOE-GJO conducts a review of the contractors proposed task plan for the upcoming fiscal year. This DOE review includes a bottoms-up analysis of scope, labor, and other direct charges which is presented by the project manager to a team comprised of contracting officers, contracting officers' representatives, other staff members, and management. During the development of the 2006 Plan, the DOE project and support staff work closely with the contractors regarding project direction. The planning document is then reviewed by various members of the DOE staff and forwarded to DOE-AL where a subsequent review takes place. DOE-GJO conducted an internal life-cycle baseline review in December 1998 for the Long-Term Surveillance and Maintenance Program.

PBS Comments:

Baseline Validation Narrative:

Annually, the DOE-GJO conducts a review of the contractors proposed task plan for the upcoming fiscal year. This DOE review includes a bottoms-up analysis of scope, labor, and other direct charges which is presented by the project manager to a team comprised of contracting officers, contracting officers' representatives, other staff members, and management. During the development of the 2006 Plan, the DOE project and support staff work closely with the contractors regarding project direction. The planning document is then reviewed by various members of the DOE staff and forwarded to DOE-AL where a subsequent review takes place. DOE-GJO conducted an internal life-cycle baseline review in December 1998 for the Long-Term Stewardship Program.

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General PBS Information

Project Validated? **Date Validated:**
Has Headquarters reviewed and approved project? No
Date Project was Added: 3/17/1999
Baseline Submission Date: 7/1/1999
FEDPLAN Project? Yes

Drivers:	CERCLA	RCRA	DNFSB	AEA	UMTRCA	State	DOE Orders	Other
	Y	Y	N	Y	Y	Y	Y	Y

Project Identification Information

DOE Project Manager: Russel Edge
DOE Project Manager Phone Number: 970-248-6037
DOE Project Manager Fax Number: 970-248-6023
DOE Project Manager e-mail address: redge@doegjpo.com
Is this a High Visibility Project (Y/N):

Planning Section

Baseline Costs (in thousands of dollars)

	1997-2006 Total	2007-2070 Total	1997-2070 Total	1997	Actual 1997	1998	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006
PBS Baseline (current year dollars)	85,087	2,341,429	2,426,516	731	731	1,457	1,457	2,159	3,200	6,820	11,000	12,550	14,370	16,450	16,350
PBS Baseline (constant 1999 dollars)	77,090	991,920	1,069,010	731	731	1,457	1,457	2,159	3,116	6,504	10,275	11,481	12,876	14,437	14,054
PBS EM Baseline (current year dollars)	85,087	2,341,429	2,426,516	731	731	1,457	1,457	2,159	3,200	6,820	11,000	12,550	14,370	16,450	16,350

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Baseline Costs (in thousands of dollars)

	1997-2006 Total	2007-2070 Total	1997-2070 Total	1997	Actual 1997	1998	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	
PBS EM Baseline (constant 1999 dollars)	77,090	991,920	1,069,010	731	731	1,457	1,457	2,159	3,116	6,504	10,275	11,481	12,876	14,437	14,054	
	2007	2008	2009	2010	2011- 2015	2016- 2020	2021- 2025	2026- 2030	2031- 2035	2036- 2040	2041- 2045	2046- 2050	2051- 2055	2056- 2060	2061- 2065	2066- 2070
PBS Baseline (current year dollars)	16,699	17,050	17,407	17,773	156,129	173,225	116,481	129,236	143,387	159,089	176,509	195,839	217,284	241,076	267,478	296,767
PBS Baseline (constant 1999 dollars)	14,059	14,059	14,058	14,058	116,082	116,082	70,352	70,352	70,352	70,352	70,352	70,352	70,352	70,352	70,353	70,353
PBS EM Baseline (current year dollars)	16,699	17,050	17,407	17,773	156,129	173,225	116,481	129,236	143,387	159,089	176,509	195,839	217,284	241,076	267,478	296,767
PBS EM Baseline (constant 1999 dollars)	14,059	14,059	14,058	14,058	116,082	116,082	70,352	70,352	70,352	70,352	70,352	70,352	70,352	70,352	70,353	70,353

Baseline Escalation Rates

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
0.00%	0.00%	0.00%	2.70%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%
2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%

Project Reconciliation

Project Completion Date Changes:

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Project AL031 / Long-Term Surveillance and Maintenance at Grand Junction

Report Number: GEN-01b

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HQ ID: 0184

Project Reconciliation

Previously Projected End Date of Project:

Current Projected End Date of Project: 9/30/2070

Explanation of Project Completion Date Difference (if applicable):

Project Cost Estimates (in thousands of dollars)

Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars):	Actual 1997 Cost:	731	Actual 1998 Cost:	1,457
Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars):	-2,188	Inflation Adjustment (2.7% to convert 1998 to 1999 dollars):		-59
Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	-2,247			

Project Cost Changes

	Cost Adjustments	Reconciliation Narratives
Cost Change Due to Scope Deletions (-):		
Cost Reductions Due to Efficiencies (-):		
Cost Associated with New Scope (+):	2,247	This is a new PBS. Actual 97/98 costs transferred from AL024, but not last year's lifecycle estimate
Cost Growth Associated with Scope Previously Reported (+):		
Cost Reductions Due to Science & Technology Efficiencies (-):		
Subtotal:	0	
Additional Amount to Reconcile (+):	1,066,822	
Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	1,066,822	

Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
Mission Complete	AL024-015		9/30/2070								
Testing 31			9/13/1998	9/14/1998							Y

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Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
Project Mission Completion			9/30/2070								
Begin new PBS for LTSM			1/31/1999								
LTSM Program established at GJO			10/1/1988								

Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
Mission Complete	AL024-015					Y					
Testing 31			Y				5	5	5	Y	
Project Mission Completion					Y						
Begin new PBS for LTSM											Start milestone for creation of a separate PBS.
LTSM Program established at GJO				Y							

Performance Measure Metrics

Category/Subcategory	Units	1997-2006 Total	2007-2070 Total	1997-2070 Total	Actual Pre-1997	Planned 1997	Actual 1997	Planned 1998	Planned 1999	Planned 2000	Planned 2001	Planned 2002	Planned 2003	Planned 2004
RS														
Assess.	NR	2.00	0.00	2.00		2.00	2.00							
RS														
Cleanup	NR	0.00	2.00	2.00										
Category/Subcategory	Units	Planned 2004	Planned 2005	Planned 2006	Planned 2007	Planned 2008	Planned 2009	Planned 2010	Planned 2011 - 2015	Planned 2016 - 2020	Planned 2021 - 2025	Planned 2026 - 2030	Planned 2031 - 2035	Planned 2036 - 2040

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Category/Subcategory	Units	Planned 2004	Planned 2005	Planned 2006	Planned 2007	Planned 2008	Planned 2009	Planned 2010	Planned 2011 - 2015	Planned 2016 - 2020	Planned 2021 - 2025	Planned 2026 - 2030	Planned 2031 - 2035
RS													
Assess.	NR												
RS													
Cleanup	NR												2.00
Category/Subcategory	Units	Planned 2036 - 2040	Planned 2041 - 2045	Planned 2046 - 2050	Planned 2051 - 2055	Planned 2056 - 2060	Planned 2061 - 2035	Planned 2066 - 2070	Exceptions	Lifecycle Total			
RS													
Assess.	NR									2.00			
RS													
Cleanup	NR									2.00			

Release Sites

Site Code	RSF ID	Change Flag	Description	Class/Subclass Name	Planned Assess. Year	Forecast Assess. Year	Actual Assess. Date	Planned Comp. Year	Forecast Comp. Year	Actual Comp. Date	Acc. Year	No Action	Comp. Status	RAD
MRAP	0001		LTSM\MSG Monticello Ground Water OU III	Surface and Groundwater/Groundwa ter Plumes	1997	2001	10/18/199 6	2035	2035			N		N
MRAP	0003		LTSM\MSG Monticello Surface Water OU III	Surface and Groundwater/Surface Water	1997	2001	10/18/199 6	2035	2035			N		N

Technology Needs

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Technology Needs

Site Need Code: AL-07-09-02-SC

Site Need Name: Hydrologic Performance Monitoring of Engineered Covers

Focus Area Work Package ID: SS-04

Focus Area Work Package: Long-Lived Caps

Focus Area: SCFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

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